

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of the claims in the application.

Listing of Claims:

1. (Currently Amended) Electrodeposited fibrin matrix with cells, wherein the cells are delivered to the matrix during fabrication of the electrodeposited fibrin matrix ~~upon a target that contains calcium~~, wherein the cells are suspended in a solution comprising molecules capable of forming fibrin during delivery to the matrix, and wherein the cells are oriented through application of mechanical force ~~a cross-linking agent is added to the electrodeposited fibrin matrix~~.
2. (Cancelled)
3. (Withdrawn) The electroprocessed fibrin matrix of claim 2, further comprising cells.
4. (Previously presented) The electrodeposited fibrin matrix of claim 1, further comprising one or more substances.
5. (Previously presented) The electrodeposited fibrin matrix of claim 4, wherein the one or more substances is a growth factor, differentiation inducer, anti-oxidant, vitamin, hormone, nucleic acid, drug, peptide, emollient, humectant, conditioner or cosmetic.
6. (Withdrawn) An engineered tissue comprising the electroprocessed fibrin matrix of claim 2 and cells.
7. (Withdrawn) The engineered tissue of claim 6, further comprising one or more substances.
8. (Withdrawn) The engineered tissue of claim 6, wherein the cells are stem cells or differentiated cells.

9. (Withdrawn) A method of delivering a substance to a desired location comprising; adding a substance to the electroprocessed fibrin of claim 1; and placing the electroprocessed fibrin containing the substance in the desired location.
10. (Withdrawn) A method of delivering a substance to a desired location comprising; adding a substance to the electroprocessed fibrin matrix of claim 2; and, placing the electroprocessed fibrin matrix containing the substance in the desired location.
11. (Withdrawn) A method of treating a wound, comprising applying the electroprocessed fibrin of claim 1 to the wound.
12. (Withdrawn) A method of treating a wound, comprising applying the electroprocessed fibrin matrix of claim 1 to the wound.
13. (Withdrawn) A method of providing hemostasis, comprising applying the electroprocessed fibrin of claim 1 to a site of bleeding.
14. (Withdrawn) A method of providing hemostasis, comprising applying the electroprocessed fibrin matrix of claim 1 to a site of bleeding.
15. (Withdrawn) A method of evaluating a biological response of a cell to a substance, comprising:
applying the substance to the electroprocessed fibrin matrix and cells of claim 3;
and,
evaluating the biological response of the cell.
16. (Withdrawn) The method of claim 15, wherein the cell is a cancer cell.
17. (Withdrawn) A method of manufacturing the electroprocessed fibrin of claim 1, comprising:
electrodepositing one or more electrically charged solutions comprising fibrin or

molecules capable of forming fibrin onto a grounded target substrate under conditions effective to electrodeposit fibrin or molecules capable of forming fibrin on said substrate to form the electroprocessed fibrin.

18. (Withdrawn) A method of manufacturing the electroprocessed fibrin of claim 2, comprising:

electrodepositing one or more electrically-charged solutions comprising fibrin or molecules capable of forming fibrin onto a grounded target substrate under conditions effective to electrodeposit fibrin or molecules capable of forming fibrin on said substrate to form the electrodeposited fibrin matrix.

19. (Withdrawn) A method of manufacturing the engineered tissue of claim 6, comprising:

electrodepositing one or more electrically-charged solutions comprising fibrin or molecules capable of forming fibrin, and cells, onto a grounded target substrate under conditions effective to deposit the electroprocessed fibrin or molecules capable of forming fibrin and the cells onto the substrate.

20. (Withdrawn) A method of manufacturing the engineered tissue of claim 6, comprising:

electrodepositing one or more electrically-charged solutions comprising fibrin or molecules capable of forming fibrin onto a grounded target substrate under conditions effective to deposit the electroprocessed fibrin or molecules capable of forming fibrin; and,

applying cells onto the substrate or into a stream of the electroprocessed fibrin or molecules capable of forming fibrin, wherein the stream is located between the grounded target substrate and the solutions.

21. (Currently Amended) An electrodeposited fibrin matrix with cells, wherein the cells are entrapped within the matrix during fabrication of the electrodeposited fibrin matrix ~~upon a target that contains calcium~~, wherein the cells are suspended in a fibrinogen solution during delivery to the matrix, and wherein the cells are oriented through application of mechanical force ~~a cross-linking agent is added to the electrodeposited fibrin matrix.~~

22. (Withdrawn) An engineered tissue comprising an electroprocessed fibrin matrix and cells.

23. (New) A construct comprising electrodeposited fibrin matrix with cells, wherein the cells are delivered to the matrix during fabrication of the electrodeposited fibrin matrix, wherein the cells are suspended in a solution comprising molecules capable of forming fibrin during delivery to the matrix, and wherein the construct has been strained, so that the cells are spread in parallel with the applied force.

24. (New) The electrodeposited fibrin matrix of any one of claims 1, 21 or 23, further comprising a cross-linking agent.

25. (New) The electrodeposited fibrin matrix of any one of claims 1, 21, or 23, further comprising calcium.